IN THE CLAIMS:

**MARKED-UP VERSION OF THE AMENDED CLAIMS**

1. (currently amended) A water jet device for separating of a biological structure, essentially comprising a pressure water flow generator (1), an operatable control and automatic water control unit (2) and a supply capillary (3) with a separating nozzle (14), wherein a separating water jet exits from the separating nozzle (14), wherein the separating nozzle (14) is furnished with a nozzle channel (15) with a circular cross-section and wherein the separating nozzle (14) is disposed at the distal end of the supply capillary (3),

wherein the separating nozzle (14)~~, as is known in principle,~~ is disposed fixedly positioned and coaxial to the supply capillary (3) and wherein the nozzle channel (15) is furnished with at least one spiral groove (16) and wherein the number of the spiral grooves (16) and the diameter and the length of the nozzle channel (15) are placed in such a ratio to each other that the separating water jet subjected to pressure is rotated.

2. (previously presented) The water jet device according to claim 1

wherein the nozzle channel (15) is a hollow cylinder,

wherein a slope of the spiral grooves (16) is dimensioned larger than the diameter of the nozzle channel (15) and wherein the spiral grooves are recessed into the hollow cylinder and exhibit a slope angle of from about 30 to 45 degrees.

3. (previously presented)The water jet device according to claim 2 wherein the spiral grooves (16) exhibit a rounded cross-sectional shape.

4. (previously presented)The water jet device according to claim 1 wherein the supply capillary (3) is equipped with one or several additional separating tools for mechanical working of the biological structure in the region of the separating nozzle (14) of the supply capillary (3).

5. (previously presented)The water jet device according to claim 1 wherein the supply capillary (3) is made out of a current conducting material and is connectable to a high frequency current supply device.

6. (previously presented) A water jet device for separating of a biological structure comprising

a pressure water flow generator;

an operatable control and automatic water control unit;

a supply capillary connected to the pressure water flow generator;

a separating nozzle attached to the supply capillary and wherein the separating nozzle is disposed at the distal end of the supply capillary, wherein the separating nozzle is disposed fixedly positioned and coaxial at the supply capillary ,

wherein the separating nozzle is furnished with a nozzle channel for forming a water jet to exit from the separating nozzle;

at least one spiral groove furnished in the nozzle channel and wherein the spiral groove and the diameter and the length of the nozzle channel are placed in such a ratio to each other that the flowing stream of water in the nozzle channel subjected to pressure is rotated and a rotating water jet is released by the nozzle channel.

7. (previously presented) The water jet device according to claim 6 wherein the nozzle channel is formed as a hollow cylinder,

wherein a slope of the spiral groove is dimensioned larger than the diameter of the nozzle channel and wherein the spiral groove exhibits a slope angle of from about 30 to 45 degrees.

8. (previously presented)The water jet device according to claim 7

wherein the spiral groove is recessed into the hollow cylinder of the nozzle channel,

wherein the spiral groove exhibits a rounded cross-sectional shape.

9. (previously presented)The water jet device according to claim 6 wherein the supply capillary is equipped with one or several additional separating tools for mechanical working of the biological structure in the region of the separating nozzle of the supply capillary.

10. (previously presented) The water jet device according to claim 6 wherein the supply capillary is made out of a current conducting material and is connectable to a high frequency current supply device.

11. (previously presented) The water jet device according to claim 6 wherein the nozzle channel has a circular cross-section modified by the cross-section of the spiral groove.

12. (previously presented) The water jet device according to claim 6 further comprising

a second spiral groove disposed running parallel to the first spiral groove in the nozzle channel.

13. (previously presented) The water jet device according to claim 6 wherein the separating nozzle has an overall shape of a hollow cylinder and wherein the nozzle channel has a shape of a hollow cylinder bore modified by the placing of the spiral groove.

14. (currently amended) A water jet device for separating of a biological structure, essentially comprising a pressure water flow generator (1), an operatable control and automatic water control unit (2) and a supply capillary (3) with a separating nozzle (14),

wherein an axis of the separating nozzle (14) coincides in direction with an adjacently disposed axis of the supply capillary (3),

wherein the separating water jet exits from the separating nozzle (14),

wherein the separating nozzle (14) is furnished with a nozzle channel (15) with a circular cross-section and wherein the separating nozzle (14) is disposed at a distal end of the supply capillary (3),

wherein the separating nozzle (14) is disposed fixedly positioned and coaxial to the supply capillary (3) and wherein the nozzle channel (15) is furnished with at least one twisted groove (16) and wherein the number of the twisted grooves (16) and the diameter and the length of the nozzle channel (15) are placed in such a ratio to each other that the separating jet subjected to pressure is rotated.

15. (previously presented) A water jet device for separating of a biological structure comprising

a pressure flow generator;

an operatable control and automatic control unit;

a supply capillary connected to the pressure flow generator;

a separating nozzle attached to the supply capillary and wherein the separating nozzle is disposed at a distal end of the supply capillary, wherein the separating nozzle is disposed fixedly positioned and coaxial at the supply capillary,

wherein the separating nozzle is furnished with a nozzle channel for forming a water jet to exit from the separating nozzle;

at least one spiral groove furnished in the nozzle channel and wherein the spiral groove and the diameter and the length of the nozzle channel are placed in such a ratio to each other that the flowing stream of water in the nozzle channel subjected to pressure is rotated and a rotating water jet is released by the nozzle channel;

a pressure line leading from the pressure flow generator to the operatable control and automatic control unit;

a connectable pulse generator placed into the pressure line.

16. (previously presented) The water jet device according to claim 15 further comprising

a laser device switched in parallel to the pulse generator.

17. (previously presented) The water jet device according to claim 15 further comprising

a heating device switched in parallel to the pulse generator.

18. (previously presented) The water jet device according to claim 15 further comprising

a freezing device switched in parallel to the pulse generator.

19. (previously presented) The water jet device according to claim 15 further comprising

a discharge capillary disposed parallel to the supply capillary and connected to the operatable control and automatic control unit through a discharge line;

an automatically controllable discharge pump connected to the discharge line.

20. (previously presented) The water jet device according to claim 13 wherein the

hollow cylinder has a length of an inner cylinder which is from about 1 to 5 times the diameter of the inner cylinder;

wherein the inner cylinder is furnished with spiral grooves;

wherein the width of the spiral grooves is 0.08 to 0.2 times the diameter of the inner cylinder of the nozzle;

wherein the depth of the spiral grooves is 0.2 to 0.4 times the width of the spiral grooves.

21. (previously presented) A method for separating biological structures comprising the steps of:

furnishing a water jet device including a pressure flow generator, an operatable control and automatic control unit, a supply capillary connected to the pressure flow generator, a separating nozzle attached to the supply capillary and wherein the separating nozzle is disposed at the distal end of the supply capillary, wherein the separating nozzle is disposed fixedly positioned and coaxial at the supply capillary;

making the water jet ready for operation such that the water jet is available with a correspondingly pre-programmed pressure, quantity and temperature ready for calling;

inserting, puncturing and piercing the supply capillary into the tissue;

leading the supply capillary into a boundary layer region of different tissues;

applying liquid in this boundary layer region in the following through the supply capillary;

forming an expansion space between different tissues; and pressing tissues apart from each other with the expansion space.

22. (previously presented) The method for separating biological structures according to claim 21 further comprising the steps of:

dissecting soft tissue components here already at the lowest pressures;

tensioning hard or elastic structures while remaining initially still uninjured.

23. (previously presented) The method for separating biological structures according to claim 21 further comprising the steps of:

supporting a dissecting process by a pulsating water jet in case of very firmly at each other resting structures.

24. (previously presented) The method for separating biological structures according to claim 21 further comprising the steps of:

deflecting a laminar flow of the water jet by spiral grooves disposed in a nozzle channel of the separating nozzle;

initiating a rotary motion in circumferential direction of the water;

directing a flow force of the water jet into the separating nozzle to be thereby subdivided into an axial remaining force component and a radially added force component;

forming a rotated water jet, where the laminar flow remains in the water jet since the tracks of motion of the individual water particles remain running further parallel to each other.

25. (previously presented) The method for separating biological structures according to claim 24 further comprising the steps of:

interacting a radially acting force component with the water jet and transposing the water jet increasingly into a region close to the circumference, where the water particles move with an increased circumferential speed;

forming a closed circulating separating edge in a form comparable to a wood drill in this region of the water jet, wherein this separating edge exhibits naturally an increased separating force relative to a straight water jet.

26. (previously presented) The method for separating biological structures according to claim 21 further comprising the steps of:

withdrawing a water amount entered through the supply capillary again from the tissue region through the discharge capillary if desired.

27. (previously presented) The water jet device according to claim 1 further comprising

a pressure line leading from the pressure water flow generator to the operatable control and automatic water control unit;

a connectable water pulse generator placed into the pressure line.

28. (currently amended) A water jet device for separating of a biological structure comprising

a pressure water flow generator for water;

an operatable control and automatic water control unit;

a supply capillary connected to the pressure water flow generator for supporting a flow of the water from the pressure water flow generator;

a separating nozzle attached to the supply capillary and wherein the separating nozzle is disposed at a distal end of the supply capillary, wherein the separating nozzle is disposed fixedly positioned and coaxial at the supply capillary for guiding water coming from the supply capillary,

wherein the separating nozzle is furnished with a nozzle channel for forming a water jet to exit from the separating nozzle;

at least one spiral groove furnished in the nozzle channel and wherein the spiral groove and the diameter and the length of the nozzle channel are placed in such a ratio to each other that the flowing stream of water in the nozzle channel subjected to pressure is rotated and a rotating water jet is released by the nozzle channel.

29. (currently amended) The water jet device according to claim 30 wherein the separating nozzle comprises a nozzle stone (22) inserted into the supply capillary, wherein the nozzle stone (22) is formed as a ring adapted to be fitted into the supply capillary with an outer cylinder surface wherein the supply capillary provides that a laminar flow of water is generated and passes into the nozzle stone (22), wherein a handle (24) with a contour suitable for gripping supports the supply capillary, wherein an inner

cylindrical surface of the nozzle stone is furnished with spiral grooves (16), wherein the rotating water jet remains integrated after exiting from the nozzle stone (22) [[(220]], wherein the rotating water jet receives sufficient linear and rotary energy to prevail against air resistance outside of the nozzle stone (22) and to further deliver the cutting action in the biological structure.

30. (previously presented) A water jet device for separating of a biological structure comprising

a pressure water flow generator;

an operatable control and automatic water control unit;

a supply capillary connected to the pressure water flow generator;

a separating nozzle attached to the supply capillary and wherein the separating nozzle is disposed at the distal end of the supply capillary, wherein the separating nozzle is disposed fixedly positioned and coaxial at the supply capillary ,

wherein the separating nozzle is furnished with a nozzle channel for forming a water jet to exit from the separating nozzle.

31. (previously presented) The water jet device according to claim 30 further comprising

a pressure line leading from the pressure water flow generator to the operatable control and automatic water control unit;

a connectable water pulse generator placed into the pressure line.

32. (previously presented) The water jet device according to claim 31 further comprising

a laser device switched in parallel to the water pulse generator.

33. (previously presented) The water jet device according to claim 31 further comprising

a heating device switched in parallel to the water pulse generator.

34. (previously presented) The water jet device according to claim 31 further comprising

a freezing device switched in parallel to the water pulse generator.

35. (previously presented) The water jet device according to claim 30 further comprising

a discharge capillary disposed parallel to the supply capillary and connected to the operatable control and automatic water control unit through a discharge line;

an automatically controllable water discharge pump connected to the discharge line.

36. (previously presented) The water jet device according to claim 30 wherein the separating nozzle is unprotected and unshielded for immediate engagement with the biological structure to be separated.

37. (previously presented) The water jet device according to claim 30 wherein the separating nozzle is protruding from the supply capillary as a separate projection.

38. (previously presented) The water jet device according to claim 30 wherein the separating nozzle has a blank front end not protected by other structures for furnishing a separating water jet having a laminar flow of

water and wherein the blank front end furnishes uninhibited engagement of the separating nozzle with the biological structure.

protruding from the supply capillary as a separate projection.

39. (previously presented) The water jet device according to claim 30 wherein the nozzle channel is formed as a hollow cylinder and wherein the hollow cylinder extends up to a discharge end of the separating nozzle.

40. (previously presented) The water jet device according to claim 30 further comprising

a discharge capillary disposed parallel to the supply capillary and connected to the operatable control and automatic water control unit through a discharge line, wherein the separating nozzle and an open end of the discharge capillary are disposed neighboring in a common projecting structure for an immediate engagement with a biological structure;

an automatically controllable water discharge pump connected to the discharge line.

41. (new) The water jet device according to claim 30 further comprising

water disposed in the supply capillary and in the separating nozzle.

42. (new) The water jet device according to claim 30 wherein only a single separating nozzle with a single nozzle channel is present.

43. (new) The water jet device according to claim 30 wherein the separating nozzle essentially consists of a single nozzle channel.

44. (new) The water jet device according to claim 43 further comprising a spiral groove disposed in the single nozzle channel for generating a stable rotating water-jet.

45. (new) The water jet device according to claim 30 wherein the nozzle channel is adapted to eject a stable stream of water.

46. (new) The water jet device according to claim 30 wherein the nozzle channel is constructed for an essentially incompressible aqueous liquid to be formed as a stable aqueous jet.

47. (new) The water jet device according to claim 46

wherein an exit end of the nozzle channel has a cylindrical shape for ejecting the stable aqueous jet with a round cross-section.

48. (new) The water jet device according to claim 45

wherein an exit end of the nozzle channel has an inner cylindrical shape with an inner spiral groove for ejecting a rotating aqueous jet with a round cross-section.

49. (new) A method for separating biological structures comprising the steps of:

furnishing a pressure flow generator;

connecting an operatable control and automatic control unit to the pressure flow generator;

connecting a supply capillary to the pressure flow generator;

attaching a separating nozzle to the supply capillary such that the separating nozzle becomes disposed at a distal end of the supply capillary and disposed fixedly positioned and coaxial relative to the supply capillary;

feeding an aqueous liquid to the pressure flow generator and from the pressure flow generator to the separating nozzle;

directing an aqueous jet released by the separating nozzle toward a biological structure.

50. (new) The method for separating biological structures according to claim 49 further comprising the steps of:

making the water jet ready for operation such that the water jet is available with a correspondingly pre-programmed pressure, quantity and temperature ready for calling;

inserting, puncturing and piercing the supply capillary into the tissue;

51. (new) The method for separating biological structures according to claim 49 further comprising the steps of:

leading the supply capillary into a boundary layer region of different tissues;

applying aqueous liquid in this boundary layer region in the following through the supply capillary;

forming an expansion space between different tissues; and

pressing tissues apart from each other with the expansion space.

52. (new) The method for separating biological structures according to claim 49 further comprising the steps of:

forming the aqueous liquid into a beam having a round cross-section with an inner cylindrically shaped exit section of the separating nozzle.

53. (new) The method for separating biological structures according to claim 49 further comprising the steps of:

forming the aqueous liquid into a rotating beam having a round cross-section with an inner cylindrically shaped exit section of the separating nozzle, wherein a spiral groove is furnished at the surface of the inner cylindrically shaped exit section.